



European
Commission



9th European Commission Conferences on EURATOM Research and Training in Safety of Reactor Systems

FISA 2019 • EURADWASTE '19

Radioactive Waste Management

Co-organised
by the European Commission
and the Romanian Presidency
of the Council of the EU in 2019


romania2019.eu


RA TEN
ICN PITEȘTI
INSTITUTUL DE CERCETĂRI NUCLEARE

in cooperation with


EUROPEAN NUCLEAR SOCIETY


IAEA
International Atomic Energy Agency


enen

4-7 June, 2019
Pitești, Romania

PROGRAMME OVERVIEW

Research and
Innovation

FISA 2019 – EURADWASTE '19 Overview Programme

European Commission
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Directorate D – Clean Planet
Unit D.4 – Euratom Research
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FISA 2019 – EURADWASTE '19 Programme Overview

edited by Stefan Preda



FISA 2019 EURADWASTE '19

4-7 June, 2019
Pitesti, Romania

Foreword

It is our pleasure to welcome you to the 9th European Commission Conferences on EURATOM Research and Training in Safety of Reactor Systems and Radioactive Waste Management. FISA and EURADWASTE conferences have always been a major milestone on the EU/Euratom agenda, gathering on a regular basis research and training organisations, academia, industry, technology platforms, European fora and European civil society, and International Organisations, participating in Euratom Framework Programmes'. The key of their success lies in coherently summarising most activities and highlighting major achievements of the main pillars of the EU/Euratom Fission Programmes, on safety of reactor systems and radioactive waste management. Following the successful edition in 2013, in Lithuania, these two major events are organised jointly with the Romanian Presidency of the Council of the EU in 2019.

All balanced energy mix scenarios elaborated in Europe on strategic long-term vision for a prosperous, modern, competitive and climate-neutral economy by 2050 include nuclear energy. While it is for each EU country to choose whether to make use of nuclear power, it remains the role of the European Union, together with its Member States and in the interest of all its citizens, to establish a framework to further develop and support EU/Euratom research and training. The European Union has since long recognised its importance and benefits also through international cooperation.

FISA 2019 EURADWASTE '19 plenary introduction and closure provide an opportunity for both communities to gather, to exchange their views on shared challenges and opportunities in EU/Euratom research and training. Stakeholders' and policy makers' participation contributes to setting the scene at EU / national / international levels and illustrating high benefits from cooperation by supporting, among others, today's Energy/Climate/Industrial policies and to tackle today's societal challenges. It also proves EU/Euratom constant success in pursuing excellence in R&D, whilst facilitating pan-European collaborative efforts across a broad range of nuclear science and technologies, nuclear fission and radiation protection.

FISA 2019 EURADWASTE '19 parallel sessions facilitate detailed presentations and panel discussions on the latest achievements, main results and success stories, as well as key recommendations in the respective areas. They are aimed at demonstrating that the knowledge base has advanced significantly, and continuity between actions co-funded over time through the Euratom Framework Programmes guarantees a high impact and is of great added value to the scientific community. It also shows a capacity is maintained to suitably respond to any unexpected event or new EU/Euratom legislative Directives requirements such as the implementation of dedicated research and innovation (or coordinated and support) actions in response to the 2011 Fukushima Daichi accident.

With the incentive of Horizon 2020, Framework Programmes enhance further integration towards a European Research Area together with better prioritisation at European level, with the capitalisation of European Technology platforms and in close collaboration with International Organisations or Fora. Evolutions towards

European Joint Programmes, together with Member States Research and Innovation Programmes, are successfully illustrating the added value of a concerted European approach in nuclear safety research and training advocated by the European Commission and Member States.

FISA and EURADWASTE are also a unique opportunity for students, PhD, MSc or young professionals to take part in the ENEN PhD Event & Prize, FISA 2019 and EURADWASTE '19 Poster and PhD awards, and FISA 2019 thematic workshops addressing cross-cutting research and innovation areas of common interest and providing recommendations for the future. The finalists will be selected and invited by a jury (Programme Committee) and awards will be presented at the joint closing plenary session. The awarded paper will be published in the European Physical Journal (EPJ N, EPJ Nuclear Sciences & Technologies), alongside a special edition of EPJ-N and then within the conference proceedings.

Participants will also be able to participate in a technical tour of the nuclear facilities at Institute for Nuclear Research Pitesti (RATEN ICN), the Nuclear Fuel Plant (FCN Pitesti), the Cernavoda Nuclear Power Plant and waste management facilities, or the Extreme Light Infrastructure – Nuclear Physics (ELI-NP) in Bucharest, one of the most advanced research facilities in the world focusing on the study of photonuclear physics and its applications.

The European Commission would like to thank the Romanian Presidency, the Ministry of Research and Innovation of Romania and the Institute for Nuclear Research (RATEN ICN) for hosting the conference in Pitesti and for the co-organisation of these events. We would also like to extend our gratitude to the speakers, chairs and co-chairs, expert reviewers of all papers and presentations, rapporteurs, projects coordinators, panel members, ENS but also all staff involved at any time whose contribution ensures that the FISA 2019 EURADWASTE '19 Conferences will engage the audience in an enjoyable, dynamic and interactive way, ensuring success of these conferences!

On behalf of the Organising and Programme Committee

Roger Garbil and Christophe Davies (EC DG RTD, FISA 2019-EURADWASTE '19 Co-chairs)

Daniela Diaconu (RATEN ICN and Romanian Presidency, Co-chair)



Joint Introduction

Tuesday June 4th, 2019 (AM)

RAMADA HOTEL, Diamond Room

Chair: Serban Constantin VALECA (RATEN ICN, RO)

Co-chair: Domenico ROSSETTI DI VALDALBERO (EC, DG RTD)

Rapporteur: Stefano MONTI (IAEA), Expert

JOINT INTRODUCTION

09:00	<p>Patrick CHILD (EC, DG RTD), Deputy Director General, Research and Innovation, European Commission</p> <p>Keynote: Euratom Research and Training and Horizon Europe framework programmes</p>
09:15	<p>Charlina VITCHEVA (EC, DG JRC), Deputy Director-General of the Joint Research Centre, European Commission</p> <p>Keynote: JRC role in Euratom Research and Training and Horizon Europe</p>
09:30	<p>Nicolae HURDUC (Minister, RO), Ministry of Research and Innovation of the Republic of Romania</p> <p>Keynote</p>
09:50	<p>Stefano MONTI (IAEA), Section Head, Nuclear Power Technology Development section, Division of Nuclear Power, Department of Nuclear Energy</p> <p>Keynote: Research and Innovation for a safe, secure and safeguarded nuclear power in support of the UN Sustainable Development Goals</p>
10:10	<p>Daniela LULACHE (OECD/NEA, FR), Head of Office of Policy and Coordination, OECD Nuclear Energy Agency</p> <p>Keynote: Nuclear Research and Innovation successes and accomplishments looking to the future</p>
10:30	<p><i>Coffee Break</i></p>
11:00	<p>Teodor CHIRICA (FORATOM, BE), President of the European Nuclear Industry Association</p> <p>Keynote: Research and Innovation benefits for a low-carbon economy, Industrial Competitiveness and sustainable development</p>
11:20	<p>Pierre Jean COULON (EESC, EU), President of the Transport Energy and Networks section, European Economic and Social Committee</p> <p>Keynote: Research and Innovation missions and benefits to Civil Society to tackle today's Societal Challenges</p>
11:40	<p>Nathan PATERSON (ENS YGN, BE), Chair European Nuclear Society Young Nuclear Generation and Joerg STARFLINGER (ENEN, BE), Vice-President of ENEN, University of Stuttgart, Germany</p> <p>Keynote: The future of Nuclear: Collaboration, Vision and Innovation – perspectives from the YGN</p>
12:00	<p>Lunch and Poster Session</p>

International / EU / EURATOM Status in Radiation Protection, Safety of Reactor Systems and Radioactive Waste Management

Al. Davila Theatre

Chair: Horia Grama (ANDR, RO)

Co-chair: Massimo Garribba (EC, DG ENER)

Rapporteur: Hans Forsström (SE), Expert

STATUS OF EU/EURATOM DIRECTIVES	
14:00	Michael Huebel (EC, DG ENER), Head of Unit, Radiation Protection and Nuclear Safety EU/Euratom Directives, 2013/59/Euratom on Basic Safety Standards, 2009/71/Euratom and 2014/87/Euratom update on nuclear safety of nuclear installations: status, challenges and future perspectives
14:20	Massimo Garribba (EC, DG ENER), Director Nuclear Energy, Safety and ITER EU/EURATOM R&D supporting Directive 2011/70/Euratom on the responsible and safe management of spent fuel and radioactive waste: status, challenges and future perspectives
RADIOACTIVE WASTE MANAGEMENT	
14:40	Pierre-Marie Abadie (ANDRA, FR), CEO Keynote: European & International status on the management and disposal of radioactive waste, developments and challenges ahead
15:10	Andrew Orrell (IAEA, Section Head for Waste and Environmental Safety) ARTEMIS in Europe, the Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning and Remediation
15:40	Christophe Davies (EC, DG RTD), Euratom Fission, Project & Policy officer Euratom research and training programme in radioactive waste management: Overview status, vision and future perspectives
16:00	<i>Coffee Break</i>
SAFETY OF REACTOR SYSTEMS	
16:30	Martin Murray (Environment Agency, UK) EURATOM STC Opinion (Scientific and Technical Advisory Committee): Key recommendations from the Opinion published early 2017 and future perspectives
16:50	Roger Garbil (EC, DG RTD), Euratom Fission, Project & Policy Officer Euratom research and training programme in safety of the reactor systems: Overview status, vision and future perspectives
17:10	Panel and General discussion on the Role of the Euratom R&T programme and Directive: Challenges and Research expectations (50')
18:30 MSc/PhD Poster introduction and Conference cocktail	



FISA 2019 EURADWASTE '19

4-7 June, 2019
Pitesti, Romania

Tuesday, June 4th, 2019, PM

FISA2019

SESSION 1 - Safety of nuclear installations

RAMADA HOTEL, Diamond Room

Chair: Teodor CHIRICA (FORATOM, BE), President

Co-chair: Maria BETTI (DG JRC, EC), Director of Directorate for Nuclear Safety and Security

Rapporteur: Abderrahim AL MAZOUZI (EDF, FR), Expert

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|-------|---|
| 13:30 | Michel MASCHI (EDF, FR)
Keynote: SNETP-NUGENIA Research and Innovation in Nuclear |
| 14:00 | Kevin MOTTERSHEAD (WOOD Plc, UK)
Reactor Performance, system reliability: Long-Term Operation (INCEFA-PLUS, SOTERIA, ATLAS-PLUS, MEACTOS, FP7-NUGENIA-PLUS) |
| 14:30 | Andreas SCHUMM (EDF, FR)
Reactor Performance, system reliability: Instrumentation and control (ADVISE, NOMAD, TEAMCABLES, FP7-HARMONICS) |
| 15:00 | <i>Coffee break</i> |
| 15:30 | Christophe DEMAZIERE (CHALMERS, SE)
Advanced numerical simulation and modelling for reactor safety (CORTEX, McSAFE, FP7-NURESAFE, FP7-HPMC) |
| 16:00 | Eija-Karita PUSKA (VTT, FI)
The Finnish nuclear programme, including LTO and new build |
| 16:30 | General discussion and research perspectives (60') |
| 18:30 | MSc/PhD Poster introduction and Conference cocktail |

Wednesday, June 5th, 2019, AM

FISA2019

SESSION 2 - Safety of nuclear installations

Ramada Hotel, Diamond Room

Chair: Guido BRACKE (GRS, DE), Waste Management Safety

Co-chair: Massimo GARRIBBA (DG ENER, EC), Director Nuclear Energy

Rapporteur: Giovanni BRUNA (FR), Expert

09:00	Stefano MONTI (IAEA) Keynote: Global trends in nuclear power: advanced reactors including SMR integrated in hybrid energy systems
09:30	Konstantina LAMBRINO (SCK-CEN, BE) Innovative Gen-II -III Reactors' Fuels and Materials (IL TROVATORE, FP7-MULTIMETAL, FP7-MATTER, FP7-SCWR-FQT)
09:50	Stéphane VALANCE (CEA, FR) Innovative and safe supply of Fuels for Reactors (LEU-FOREVER, HERACLES-CP, ESSANUF)
10:10	Ahmed BENTAIB (IRSN, FR) Safety assessments and severe accidents, impact of external events on nuclear power plants and on mitigation strategies (IVMR, SCO2-HeRo, FP7-SAFEST, FP7-PASSAM, FP7-CESAM, FP7-ALISA)
10:30	Coffee Break
11:00	Evelyne FOERSTER (CEA, FR) Probabilistic Safety Assessment for internal and external events (NARSIS, FP7-ASAMPSE-E)
11:20	Federico ROCCHI (ENEA, IT) Nuclear and radiological emergency management and preparedness (FASTNET, FP7-PREPARE)
11:40	General discussion and research perspectives (50')
12:30	Lunch and Poster Session

EURADWASTE'19

SESSION 1 - Predisposal and disposal technology developments

Al. Davila Theatre

Chair: Jon MARTIN (RWM, UK)

Rapporteur: Wilhelm BOLLINGERFEHR (BGE, DE), Expert

09:00	Radek Trtílek (ÚJV Řež, CZ) Keynote: Role, contributions, challenges and perspectives from Research Entities in advancing knowledge, solutions and technologies for the management and disposal of radioactive waste
09:25	Danièle Roudil (CEA, FR) Nuclear site integrated characterisation for radioactive waste minimisation (INSIDER)
09:50	Denise Ricard (ANDRA, FR) Characterization of conditioned nuclear waste for its safe disposal in Europe (CHANCE)
10:15	<i>Coffee break</i>
10:45	Matti Nieminen (VTT, FI) Thermal treatment for radioactive waste minimisation (THERAMIN)
11:10	Johanna Hansen (POSIVA, FI) Tunnel plugs and shaft seals demonstrations (DOPAS)
11:35	Johan Bertrand (ANDRA, FR) Development and Demonstration of Monitoring Strategies and Technologies (Modern2020)
12:00	Panel and General discussion on Predisposal and disposal technology developments (30')
12:30	Lunch

Wednesday, June 5th, 2019, PM

FISA2019

SESSION 3 - Advanced nuclear systems and fuel cycles

Ramada Hotel, Diamond Room

Chair: Franck CARRE (CEA, FR), Scientific Director at Nuclear Energy Division

Co-chair: Roger GARBIL (DG RTD, EC), Project and Policy Officer

Rapporteur: Teodora RETEGAN (CHALMERS Univ., SE), Expert

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|-------|--|
| 14:00 | Noël CAMARCAT (EDF, FR)
Keynote: SNETP-ESNII and EERA-JPNM Research and Innovation |
| 14:20 | Konstantin MIKITIUK (PSI, CH)
R&D in support to safety assessment, design and licensing of ESNII/Gen-IV (ESFR-SMART, ESNII+, SESAME, SAMOFAR, VINCO, FP7-ALLIANCE, FP7-SILER, FP7-SARGEN-IV, FP7-JASMIN) |
| 14:50 | Stéphane BOURG (CEA, FR)
From fuel to fuel: Dissolution, Partitioning and fuel manufacturing (GENIORS, FP7-SACSESS, FP7-ASGARD) |
| 15:20 | Hamid AIT ABDERRAHIM (SCK-CEN, BE)
Partitioning and Transmutation, contribution of MYRRHA to an EU strategy for HLW management (MYRTE, FP7-MARISA, FP7-MAXSIMA, FP7-SEARCH, FP7-MAX, FP7-FREYA, FP7-ARCAS) |
| 16:00 | <i>Coffee break</i> |
| 16:20 | Lorenzo MALERBA (CIEMAT, ES)
Innovative Gen-IV Fuels and Materials, EERA-JPNM, Fission and Fusion (GEMMA, INSPYRE, M4F, TRANSAT, FP7-MATISSE, FP7-PELGRIMM) |
| 16:50 | Grzegorz WROCHNA (NCBJ, PL)
Nuclear Cogeneration with High Temperature Reactors (GEMINI-PLUS, FP7-NC2I-R) |
| 17:10 | Enrique GONZALEZ (CIEMAT, ES)
Nuclear data activities (FP7-CHANDA, FP7-ERINDA, FP7-EUFRAT) |
| 17:30 | General discussion and research perspectives (30') |

19:00 ENEN PhD Prize and Conference dinner

Parallel Sessions

EURADWASTE'19

SESSION 2 – Radioactive waste source term and science for disposal safety

Al. Davila Theatre

Chair: Antonio Gens (UPC, ES),

Co-chair: Jean-Paul Glatz (DG JRC, EC)

Rapporteur: Piet Zuidema (Zuidema Consult GmbH, CH), Expert

- 14:00 **Johan Andersson** (SKB, SE)
Keynote: From past to future science underpinning the Safety Case of deep geological repositories – Challenges until licensing and how maintain knowledge and competence on cutting edge science afterwards during operation
- 14:25 **Lena Zetterstrom Evins** (SKB, SE)
Spent fuel dissolution (REDUPP and DISCO)
- 14:50 **Simon Norris** (RWM, UK)
Overview of Carbon-14 Source Term generation and release from irradiated metals, ion-exchange resin and graphite (CAST)
- 15:15 **Marcus Altmaier** (KIT/INE, DE)
Research and innovation action on cement-based materials, properties, evolution and barrier functions (CEBAMA)
- 15:40 *Coffee break*
- 16:10 **Patrick Sellin** (SKB, SE)
Bentonite Erosion: Effects on the Long-term Performance of the Engineered Barrier and Radionuclide Transport (BELBAR), and
Bentonite Mechanical Evolution (BEACON)
- 16:50 **Birgitta Kalinowski** (SKB, SE)
Microbiology in nuclear waste disposal (MIND)
- 17:15 Panel and General discussion on Radioactive waste source term and science for disposal safety (30')

19:00 ENEN PhD Prize and Conference dinner

Thursday, June 6th, AM

FISA2019

SESSION 4 - Education and training, research infrastructures and international cooperation

Ramada Hotel, Diamond Room

Chair: Daniela LULACHE (OECD/NEA, FR), Head of Office of Policy and Coordination

Co-chair: Foivos MARIAS (DG RTD, EC), Project and Policy Officer

Rapporteur: Gérard COGNET (FR), Expert

09:00	Franck CARRE (CEA, FR) Growing Synergies between Fission and Fusion Research towards demonstration plants
09:30	Walter AMBROSINI (University of PISA, IT) Education, Training and mobility: towards a common effort to assure a future workforce in Europe and abroad (ANNETTE, ENEN-PLUS, BRILLIANT, CORONA-II, FP7-ENEN-RU-II, FP7-ARCADIA, FP7-NEWLANCER, FP7-ECNET, FP7-NUSHARE, FP7-GENTLE)
10:00	Michèle COECK (SCK-CEN, BE) Improved expertise in radiation protection, nuclear chemistry and geological disposal (CONCERT, MEET-CINCH, FP7-ENETRAP-III, FP7-EAGLE, FP7-CINCH-II, FP7-PETRUS-III)
10:30	<i>Coffee break</i>
11:00	Concetta FAZIO (DG JRC, EC) Supporting Access to key infrastructures and pan-European research (FP7-GENTLE, FP7-TALISMAN, others)
11:30	Jean-Yves BLANC (CEA, FR) Supporting Infrastructures and Research Reactors: Status, needs and International Cooperation (FP7 and H2020 JHR ACCESS RIGHTS)
12:00	General discussion and research perspectives (30')
12:30	Lunch

Parallel Session

EURADWASTE'19

SESSION 3 - Networking of research communities, Joint Programming of national programmes and integration of Radioactive waste producers

Al. Davila Theatre

Chair: Piet Zuidema (Zuidema Consult GmbH, CH)

Co-chair: Ian Gordon (IAEA, AT)

Rapporteur: Jacques Delay (ANDRA, FR), Expert

08:30	Christophe Davies (DG RTD, EC) <i>Session Introduction</i> Networking of the research communities with a national mandate for RD&D in RW disposal – view from WMOs, TSOs, REs and less developed or advanced programmes on their R&D needs, contribution to the European Joint Programme development, expected impacts and future perspectives
08:40	Robert Winsley (RWM, UK) The Implementing Geological Disposal of radioactive waste Technology Platform (IGD-TP) – evolving into our second decade
08:55	Delphine Pellegrini (IRSN, FR) The SITEX initiative
09:20	Christophe Bruggeman (SCK-CEN, BE) “EURADSCIENCE”, a research organisations network for radioactive waste management science within Europe
09:35	Bálint Nos (PURAM, HU) Needs of countries with longer timescale for deep geological repository implementation
09:50	Frédéric Plas and Marie Garcia (ANDRA, FR) European Joint Programme on radioactive waste management (EURAD) Joint Programming of national research and development programmes in the management and disposal of radioactive waste – The European Joint Programme in Radioactive waste management (EJP)
10:20	<i>Coffee break</i>
10:50	Stefan Mayer (IAEA, AT) Radioactive waste management: a national responsibility, at a global scale, requiring local solutions – and things the IAEA can do to help Synergies between the Euratom European Joint Programme on radioactive waste management and the IAEA and OECD NEA programmes on the State of knowledge, Guidance on R&D and Training and mobility – Way forward
11:05	Rebecca Tadesse (OECD/NEA, FR) Perspective from the OECD Nuclear Energy Agency radioactive waste management programme
11:20	Michel Pieraccini (EDF, FR) Keynote: EDF suggestions and strategy on ways and means, including R&D on pre-disposal and radioactive waste management for enlarging the European Joint Programme on waste disposal for joint implementation of joint programming
11:45	Panel and General discussion on Joint Programming of national programmes and integration of waste producers (45')
12:30	Lunch

Joint Conclusions

Thursday, June 6th, 2019 PM

Hotel Ramada, Diamond Room

Chair: Said ABOUSAHL (EC, DG JRC)

Co-chair: Domenico ROSSETTI DI VALDALBERO (EC, DG RTD)

Rapporteur: Stefano MONTI (IAEA), Expert

14:00 (15')	Nicolae Hurduc (Minister, RO), Ministry of Research and Innovation of the Republic of Romania Keynote
14:10 (45')	Poster and PhD Awards FISA 2019 and EURADWASTE '19 Poster and PhD Awards
15:00 (20')	Hans Forsström (SE) Expert rapporteur EURADWASTE '19 - Key messages and future perspectives
15:20 (20')	Stefano Monti (IAEA), Expert rapporteur FISA 2019 - Key messages and future perspectives
15:40 (20')	Closing remarks from the Romanian Presidency and the European Commission

FISA 2019 Technical workshops

June 4th 14:00 – 17:00	Tuesday, 4 June
Opal Room	1. Infrastructures and International Cooperation, co-funding instruments, and partnerships in research and innovation
Onix Room	2. Innovations beyond technology
Ametist Room	3. E&T networking event
June 5th 11:00 – 12:30	Wednesday, 5 June
Onix Room	4. ALFRED: a sizeable opportunity for Europe
June 6th 09:00 – 12:00	Thursday, 6 June
Onix Room	5. Cross-cutting fission, fusion and non-nuclear energy synergies, challenges and opportunities
Opal Room	6. Decommissioning challenges and opportunities



FISA 2019 EURADWASTE '19

4-7 June, 2019
Pitesti, Romania

13th ENEN PhD Event&Prize 2019



Wednesday, 5th June

Hotel Ramada, OPAL Room

Day 2

<http://www.enen.eu/en/phd/phdevent2019.html>

13th ENEN PhD Prize 2019 will be organized in the framework of the FISA 2019 and EURADWASTE'19 Conferences in Pitesti, Romania, 4 – 7 June 2019 (<http://fisa-euradwaste2019.nuclear.ro/>) by the European Nuclear Education Network (ENEN) Association, in cooperation with the Joint Research Centre of the European Commission.

The objectives of the ENEN PhD Event are:

- to provide a forum for PhD students to present their research work to their fellows and colleagues in a friendly but competitive spirit,
- to promote the research work of PhD students in the nuclear fields, in particular experimental work,
- to set up a bridge between PhD students and professionals in the nuclear field.

09:00 - 12:00

Students will be admitted to the FISA 2019 and EURADWASTE'19 Conferences for all four days, June 4 – 7, 2019.

And

All PhD students will participate in the poster session on June 4th and conference welcome cocktail.

14:00 – 18:00

Competition presentations will take place on Wednesday, June 5th, 2019. Award ceremony of the ENEN prize will be held on the same day.

All participants are requested to attend the poster session, the competition event and the award ceremony of the ENEN Prize.

The event will consist of up to 12 PhD presentations nominated by ENEN Members and selected by the ENEN PhD Prize Jury. The event will be divided into several sessions according to the subjects. The participants will make a presentation of their research work for 25 minutes followed by 5 minutes questions and discussion.

All presentations will be judged by the Jury members on the submitted paper as well as on the quality of their presentation and on the clarity in the discussion while answering the questions and discussions. Three best presentations will be awarded the ENEN Prize. Please see the "Criteria and Procedure for the ENEN Prize" in Annex I.

The Award Ceremony of the ENEN Prizes will be held during the FISA 2019 and EURADWASTE'19 Conferences, on Wednesday, June 5th, 2019.

Poster Sessions

FISA2019 PhD/MSc Student Competition

from **Tuesday, 4th June, 09:00** to **Thursday, 6th June, 16:00**
at **Ramada Hotel, Diamond Room Lobby**

EURADWASTE'19 PhD/MSc Student Competition

on **Tuesday, 4th from 09:00 to 20:00**
at **Ramada Hotel, Diamond Room Lobby**
and
from **Wednesday 5th June, 09:00** to **Thursday, 6th June, 16:00**
at **Al. Davila Theatre**

FISA2019 Posters (Euratom Projects and Euratom Topics)

from **Wednesday 5th June, 09:00** to **Thursday, 6th June, 16:00**
at: **Ramada Hotel, Topaz Room**

EURADWASTE'19 Posters (Euratom Projects and Euratom Topics)

on **Tuesday, 4th from 18:00 to 20:00**
at **Ramada Hotel, Topaz Room**
and
from **Wednesday 5th June, 09:00** to **Thursday, 6th June, 16:00**
at **Al. Davila Theatre**

Friday, 7 June

TRIGA research reactor and Hot Cells facilities (at the Institute for Nuclear Research) and Nuclear Fuel Factory (in Pitesti-Mioveni)

Technical visits of the RATEN ICN experimental facilities (TRIGA research reactor HEU to LEU converted, Hot Cells, Material Testing Laboratories and Radioactive Waste Treatment Plant) will be organized. Pitesti Nuclear Fuel Plant, FCN Pitesti ensures the production of about 10.080 CANDU nuclear fuel bundles nuclear fuel annually for the operation of the two units at Cernavoda NPP.

Departure - 8:30; Return in Pitesti - 15:00
From/To: Muntenia Place and Ramada Hotel

ELI – Extreme Light Infrastructure (in Bucharest-Magurele)

Extreme Light Infrastructure (ELI) will be the only European and International Centre for high-level research on ultra-high intensity laser, laser-matter interaction and secondary sources with unparalleled possibilities. This infrastructure will create a new open access European laboratory with a broad range of science covering frontier fundamental physics, new nuclear physics and astrophysics as well as applications in nuclear materials, radioactive waste management, material science and life sciences.

AM/PM

Departure - 8:00 from Ramada Hotel
Return: 13:00 Bucharest Center and 14:00 Bucharest Airport

Cernavoda NPP and Waste management facilities (Cernavoda–Constanta)

Cernavoda Nuclear Power Plant ensures the safe operation of Units 1 and 2, each with an installed power of 700 MW. The two nuclear reactors from Cernavoda NPP ensures about 20% of Romania's energy demand. Cernavoda NPP uses Canadian CANDU 6 technology (Canadian Deuterium Uranium) with natural uranium as fuel and heavy water as moderator and cooling agent. Cernavoda NPP Unit 1 was commissioned on 2 December 1996 and Unit 2 on 28 September 2007.

Departure - 7:00 from Ramada Hotel
Return: 18:00 Bucharest Center and 19:00 Bucharest Airport
or 16:00 Constanta (for those planning the weekend in Romania, the Black Sea side could be a good choice!)

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FISA2019, the 9th European Commission (EC) conference on Euratom Research and Training in Safety of Reactor Systems will be held under the auspices of the Romanian Presidency 2019 of the European Union (EU) in Pitesti, on 4-7 June 2019. It will be organised concurrently with the 9th EURADWASTE '19 conference on the management of radioactive waste and geological disposal in Europe.

FISA 2019 and EURADWASTE '19 conferences objectives are:

- To present progress and key achievements of some 90 projects carried out, since the previous conference edition in 2013, as part of the 7th and Horizon 2020 Euratom Research and Training Framework Programmes (FP)
- To stimulate discussions on the state of play of R&D, key challenges addressed at national, European and international levels on Research and Innovation policies, synergies and partnerships benefitting research and innovation programmes, and future perspectives.

FISA 2019 and EURADWASTE '19 conferences will address and engage with all relevant stakeholders involved: research and training organisations, academia, industry, technology platforms, European fora and European civil society, and International Organisations.

There will be many opportunities for interaction within dedicated parallel & poster sessions, and thematic workshops. The latest EC proposal for a new Framework Programme for Research and Innovation for the period 2021-27, 'Horizon Europe' and 'Euratom Research and Training' programme will also be addressed.

Studies and reports

